Electronic Version
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Claims

[c1] 1.A one drop fill (ODF) liquid crystal display (LCD) panel comprising:
a first substrate comprising:
a pixel array region positioned on a central part of the first substrate;
a sealant region positioned on a bordering part of the first substrate and surrounding the pixel array region; and
a light-shielding pattern positioned on a surface of the sealant region;
a second substrate;
a sealant pattern positioned between the first substrate and the second substrate and corresponding to the sealant region for combining the first substrate with the second substrate; and
a liquid crystal layer positioned between the first substrate and the second substrate.

[c2] 2.The ODF LCD panel of claim 1 wherein the sealant pattern comprises a photocuring sealant.

[c3] 3.The ODF LCD panel of claim 1 wherein the light-shielding pattern is for preventing from light leakage

through the sealant region, the light-shielding pattern comprising a first metal pattern, a second metal pattern, and a first insulating layer positioned between the first metal pattern and the second metal pattern.

[c4] 4.The ODF LCD panel of claim 3 wherein the pixel array region further comprises a plurality of pixels arranged in arrays, each pixel including a thin film transistor (TFT).

[c5] 5.The ODF LCD panel of claim 4 wherein when the first metal pattern is connected to a gate of the TFTs, the second metal pattern is used to prevent from light leakage through the first metal pattern.

[c6] 6.The ODF LCD panel of claim 4 wherein when the second metal pattern is connected to a source or a drain of the TFTs, the first metal pattern is used to prevent from light leakage through the second metal pattern.

[c7] 7.The ODF LCD panel of claim 3 wherein the first metal pattern and the second metal pattern further comprise at least a second insulating layer for preventing a coupling effect from occurring between the first metal pattern and the second metal pattern.

[c8] 8.The ODF LCD panel of claim 1 wherein the light-shielding pattern is a metal layer.

[c9] 9.The ODF LCD panel of claim 1 wherein the sealant pattern is positioned in the sealant region of the first substrate.

[c10] 10.The ODF LCD panel of claim 1 wherein the sealant pattern is positioned on a surface of the second substrate corresponding to the sealant region of the first substrate.

[c11] 11.A display panel comprising:
a first substrate comprising:
a pixel array region positioned on a central part of the first substrate;
a sealant region positioned on a bordering part of the first substrate and surrounding the pixel array region; and
a light-shielding pattern positioned on a surface of the sealant region;
a second substrate; and
a sealant pattern positioned between the first substrate and the second substrate and corresponding to the sealant region for combining the first substrate with the second substrate.

[c12] 12.The display panel of claim 11 wherein the sealant pattern comprises a photocuring sealant.

[c13] 13.The display panel of claim 11 wherein the light-shielding pattern further comprises a first metal pattern and a second metal pattern for preventing from light leakage through the sealant region.

[c14] 14.The display panel of claim 13 wherein the pixel array region further comprises a plurality of pixels arranged in arrays, each pixel including a thin film transistor (TFT).

[c15] 15.The display panel of claim 14 wherein when the first metal pattern is connected to a gate of the TFTs, the second metal pattern is used to prevent from light leakage through the first metal pattern.

[c16] 16.The display panel of claim 14 wherein when the second metal pattern is connected to a source or a drain of the TFTs, the first metal pattern is used to prevent from light leakage through the second metal pattern.

[c17] 17.The display panel of claim 13 wherein the first metal pattern and the second metal pattern further comprise at least an insulating layer for preventing a coupling effect from occurring between the first metal pattern and the second metal pattern.

[c18] 18.The display panel of claim 11 wherein the display panel is a one drop fill (ODF) LCD panel.

[c19] 19.The display panel of claim 11 wherein the light-shielding pattern is a metal layer.

[c20] 20.The display panel of claim 11 wherein the sealant pattern is positioned in the sealant region of the first substrate.

[c21] 21.The display panel of claim 11 wherein the sealant pattern is positioned on a surface of the second substrate corresponding to the sealant region of the first substrate.